

REMARKS

Claims 1-7 remain pending in the present Application. Reconsideration and allowance of the claims are respectfully requested in view of the following remarks.

Double Patenting Rejection

Claims 1 and 3-7 stand rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1, 5, 6, 13, 14, 17, and 18 of U.S. Patent Application No. 10/841,622 in view of U.S. Patent No. 6,531,073.

Applicants have filed concurrently herewith a Provisional Terminal Disclaimer rendering the rejection moot.

Claim Rejection under 35 USC 103

Claims 1-3, 5, and 6 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Patent No. 6,531,073 in view of U.S. Patent Nos. 4,180,740, 5,360,578, and 4,138,361, and WO Patent No 01/87801. Applicants respectfully traverse.

The primary reference, U.S. Patent No. 6,531,073, purportedly discloses barium fluorobromiodide phosphors of the same formula as claimed by Applicants but is silent as to the claimed coating and coating process.

The secondary references, U.S. Patent Nos. 4,180,740, 5,360,578, and 4,138,361, purportedly teach that barium fluorohalide photostimulable polymers are degraded by moisture and should be coated with a moisture protective coating. More specifically, US Patent No. 4,180,740 teaches and suggests admixing, combining or reacting the phosphor particles with organic substances that are capable of reacting with hydrogen chloride or labile hydrogen. US Patent No. 5,360,578 teaches and suggests coating a phosphor-containing layer with a protective layer. The materials suggested include nitrocellulose, ethylcellulose, cellulose acetate, poly (meth)acrylic resin, and a polyamide film. US Patent No. 4,138,361 is directed to admixing, combining or reacting the phosphor particles with at least one metal organic substances.

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In making this combination, the Examiner is relying on WO 01/87801 to teach the aspect of coating a fluorine-containing compound onto the individual particles. However, WO 01/87801 is directed to coating natural stones such as granite, marble, limestone, and the like with a fluoropolymer to render the natural stones water resistant. This is markedly different from subjecting phosphor particles in the photostimulable phosphor to a surface treatment by using a fluorine-containing compound after calcining the phosphor particles, which are surface treated in the manner claimed to prevent deterioration in sensitivity. Preventing sensitivity deterioration is markedly different from improving water resistance. One wouldn't be motivated to look at art related to moisture resistance to prevent sensitivity deterioration. As noted in Applicants' application in the carryover paragraph of pages 16-17, "[T]he present inventors have further found that for preventing deterioration in sensitivity, even if only either one of deliquescence and alteration is prevented, fundamental solution can not be achieved, and both of the deliquescence due to moisture absorption and alteration of the phosphor must be prevented." Thus, by simply coating amorphous fluoropolymers as described in the reference would provide water resistance but not alteration of the phosphor structure. The rare earth activated alkaline earth metal fluorohalide photostimulable phosphor as claimed by Applicants provide prevention of both deliquescence and alteration.

Moreover, stones such as marble, granite, limestone are markedly different in terms of composition, form and function than phosphor particles for use in radiographic panels. In particular, the size provide by the disclosed stones is significantly larger than the particle sizes employed for phosphor particles (10-30 microns) for use in the radiographic panel. The sizes of phosphor particles are about 10 to about 20 microns whereas the stones are significantly larger. In the example section, although the stone specimens are 5 x 5 x 2 centimeter, it is believed that the end application is for historical figures formed of the stones. Likewise, the compositions of stones relative to the phosphor particles are markedly different from the composition of phosphor particles and it would be expected that surface treatment would behave differently for each composition.

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In view of the foregoing, it is requested that the rejection be withdrawn. There is no disclosure or suggestion of Applicants' claimed photostimulable phosphors and processes that are surface treated with a fluorine-containing compound.


It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and allowance are requested.

The Examiner is invited to contact Applicants' Attorneys at the below-listed telephone number regarding this Amendment or otherwise regarding the present application.

If there are any charges with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' attorneys.

Respectfully submitted,

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